

1                   **ABSTRACT OF THE DISCLOSURE**

2                  Included herein is a system and method for controlling a velocity vector  
3                  of an overhead crane. A motor is attached to the crane and is positioned to  
4                  move the overhead crane and has an output vector including a rotational  
5                  direction and a rotational speed. A variable frequency drive is positioned to  
6                  transfer voltage and current at a frequency to the motor. A processing unit  
7                  converts the output vector to an amount of voltage and current at a given  
8                  frequency and can instruct the variable frequency drive to send a frequency to  
9                  the motor at a frequency substantially equal to the frequency at which the  
10                 motor is presently rotating. This creates a speed match for the motor reducing  
11                 spikes during operation of the motor and substantially eliminates open circuit  
12                 decay. A hydraulic brake operates in connection with the processing unit and  
13                 the variable frequency drive to slow the crane without driving the motor into  
14                 the brake.